MULTIMEDIA **UNIVERSITY**

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SUPPLEMENTARY EXAMINATION

TRIMESTER 1, 2015/2016

TIS 2351 / THI 3461 – HUMAN COMPUTER INTERACTION
(All sections / Groups)

17 NOV 2015
2.30 PM – 4.30 PM
(2 HOURS)

INSTRUCTIONS TO STUDENTS

1. This question paper consists of 8 pages with 4 Sections only.

2. Attempt **ALL** questions in **SECTION A, SECTION B, SECTION C** and **SECTION D**. The distribution of the marks for each question is given.

3. Please write all your answers in the answer box associated with each question in this question paper.

Section A: Answer all questions.

Fill in each blank with ONE word that best fits the meaning of the sentence as a whole.

(10 marks)

Answer

Interaction design is concerned with designing

a. ___ products to support the way

b. ___ communicate and interact in their everyday and

working lives. Interaction design is **c.** ___, involving

many inputs from wide-ranging disciplines and fields.

The process of interaction design involves

d. ___ basic activities: (1) identifying

e. ___ and establishing requirements for the user

experience, (2) developing alternative **f.** ___ that meet

those requirements, (3) **g.** ___ interactive versions of the

designs so that they can be communicated and assessed,

and (4) **h.** ___ what is being built throughout the process

and the user experience it offers. These activities are

a.	
b.	
c.	
d.	
e.	
f.	
g.	
h.	

Continued ......

Answer

intended to inform one another and to be **i.** ___. The

i.

interaction design lifecycle model is **j.** ___ to lifecycle

j.

models from other fields.

Section B: Answer all questions.

Identify the choice that best completes the statement or answers the question.

(10 marks)

Answer

1) Which of the following is a design principle?
   A. Affordances.
   B. Coordinating.
   C. Models.
   D. Prototypes.

2) Which of the following is an interaction type?
   A. Conversing.
   B. Consistency.
   C. Cognitive walkthrough.
   D. Controlled experiment.

3) The following are design implications to support attention EXCEPT
   A. Avoid cluttering the interface with too much information.
   B. Make information salient when it needs attending to at a given stage of a task.
   C. Provide users with a variety of ways of encoding digital information to help them remember where they have stored.
   D. Search engines and form fill-ins that are simple are much easier to use.

4) The following situations elicit negative responses from users EXCEPT
   A. When error messages pop up are vague.
   B. When an application doesn't work properly or crashes.
   C. When a mobile system instructing you politely where to go after having taken a wrong turn.
   D. When the appearance of an interface is too gimmicky.

Continued ....

5) The following are guidelines for developing interview questions EXCEPT
    A. Compound sentences can be confusing, so split them into two separate questions.
    B. Try to keep questions neutral.
    C. Explain things to interviewees in layman's terms.
    D. Observe and record users perform their activities.

6) Which of the following is a coding type for grounded theory?
    A. Appendix coding.
    B. Closure coding.
    C. Side coding.
    D. Open coding.

7) Which of the following is NOT an external cognitive framework?
    A. Embodied interaction.
    B. Mental model.
    C. Distributed cognition.
    D. External cognition.

8) Which of the following is NOT an emotional design level?
    A. Visceral level.
    B. Social level.
    C. Behavioral level.
    D. Reflective level.

9) Which of the following is NOT a principle of user-centered approach?
    A. Early focus on users and tasks.
    B. Empirical measurement.
    C. Iterative design.
    D. Availability of resources.

10) Which of the following is NOT an information visualization technique?
    A. Trees.
    B. Clusters.
    C. Vending machines.
    D. Scatter plot diagrams.

Continued ....

Section C: Answer all questions.

1. You will design a species identification learning system/application for visitors at the National Zoo. Identify tasks associated with this product that would best be supported by each of the interaction types: instructing, conversing, manipulating and exploring.

(5 marks)

Answer

2. Design/sketch a low-fidelity storyboard that depicts how to buy tickets(s) of an entertainment theme park. *NOTE: the storyboard should consist of at least 5 scenes/frames.

(5 marks)

Answer

Section D: Read the case study below and answer all questions.

In a Wild Study of Skiers

Jambon and Meillon (2009) carried out an in the wild study to evaluate whether and how skiers might use a mobile device which has been designed to help them improve their performance. Each skier wore a helmet that had an accelerometer and a mini-camera on top of it (see Figure 1 –left picture). These were used to gather data that could be used to provide feedback of the skiers, performance that were displayed on a smart phone (see Figure 1- right picture). The study examined how the mobile system was used by the participants while skiing. A series of trials were run in which skiers descended the mountain. Video clips from the mini camera and data from the accelerometer were collected for each skier's descent. The skiers were then asked to enter a chalet where the research team downloaded this data. The skiers then received SMS messages telling them that their data could be reviewed on their smart phones. This included: maps of their ski runs, distance covered, duration of descent, maximum speed, and the video recorded. Figure 2 shows how the different components were linked together. When and how often the skiers consulted their smart phones for feedback was logged. To great surprise of the evaluators, the skiers did not check their performance on the slopes. Instead they preferred to wait and review it in the bar during breaks. This show how in the wild studies can reveal unexpected findings. Approximately a week after the ski trials, the evaluators ran a focus group with the skiers in order to learn how they felt about the system. This was organized as an informal dinner at which the skiers confirmed that they preferred to get back their feedback after skiing on the slopes, so that their time on the slopes was not interrupted. The skiers also discussed the problems associated with using the equipment on the sloped. For example, the Bluetooth links between the GPS system and the smart phones were not reliable and there were other technical problems too.

Figure 1 (left picture) shows a skier wearing a helmet with an accelerometer and a mini-camera placed on it for assessing the skier's performance and (right picture) shows the smartphone that provides feedback to the skier in the form of visualizations.
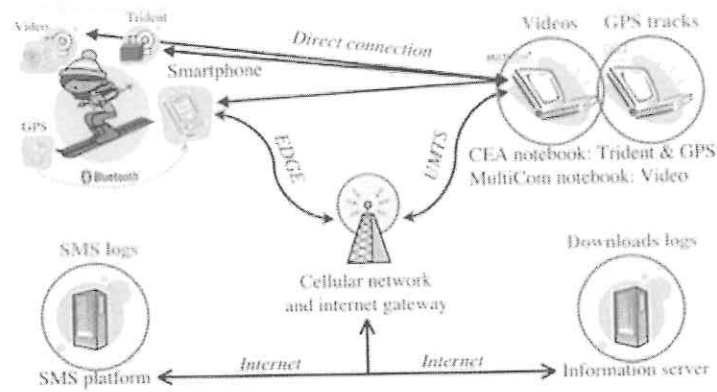
Figure 2 shows components of the skiing system.

1) Identify the aim of this evaluation study.

(1 mark)

Answer

2) Identify the subjects who participated in the study.

(1 mark)

Answer

3) Identify the kind of setting used in this study.

(1 mark)

Answer

4) Identify the stage in the product lifecycle evaluation that this study takes place.

(1 mark)

Answer

5) Identify the evaluation method used in this study.

(1 mark)

Answer

6) What kind of data is collected in this study?

(1 mark)

Answer

7) Provide two ways on how the data in this study are captured or coded.

(2 marks)

Answer

8) Briefly describe which types of data in this study that are collected.

(2 marks)

Answer

End of Page